



ASSESSMENT REPORT

Ulan Coal Mine Section 96(1A) Modifications

1 BACKGROUND

Ulan Coal Mine is located approximately 2 kilometres from the village of Ulan, within the Mid Western Regional Council Local Government Area (LGA) (see Figure 1). It is owned and operated by Ulan Coal Mines Limited (UCML), a joint venture between Xstrata Coal Australia Pty Limited (90%) and Mitsubishi Development (10%).

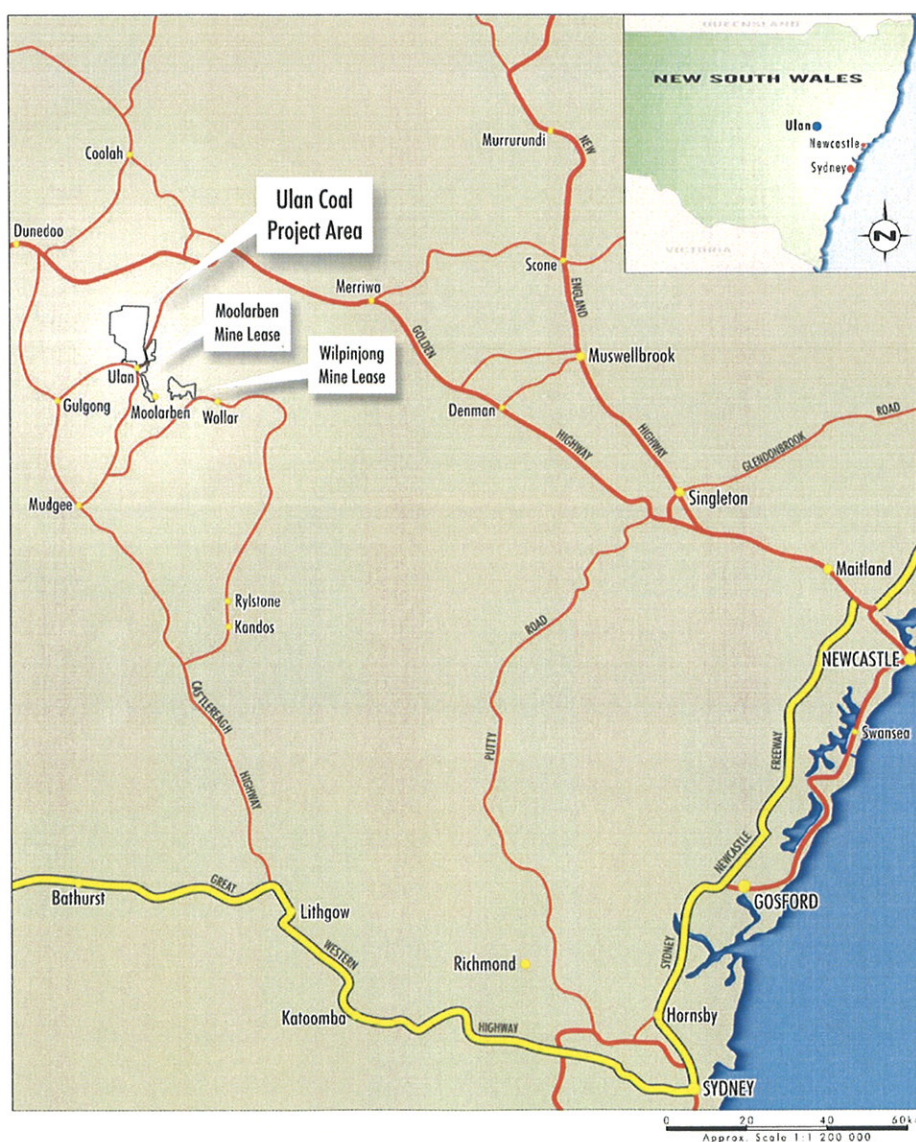


Figure 1: Location of Ulan Coal Mine

Ulan Coal Mine was originally approved in 1981. It currently operates under multiple Ministerial development consents controlling both open cut and underground mining operations, as well as the associated surface facilities.

2 PROPOSED MODIFICATION AND PROJECT NEED

On 21 November 2008, UCML submitted an application to the Department, seeking to modify two development consents (DA 113-12-98 and DA 103-5-2005) to allow for minor changes to mining infrastructure at Ulan Coal Mine under Section 96(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

DA 113-12-98 was approved by the Minister on the 20 December 1999, to allow for the extension of underground coal mining operations and construction of associated surface facilities. The modification associated with this consent consists of the construction of a Reverse Osmosis Plant (RO Plant) to treat water from the East Pit (via Rowan's Dam) prior to discharge to the waters of Ulan Creek (see Figure 2).

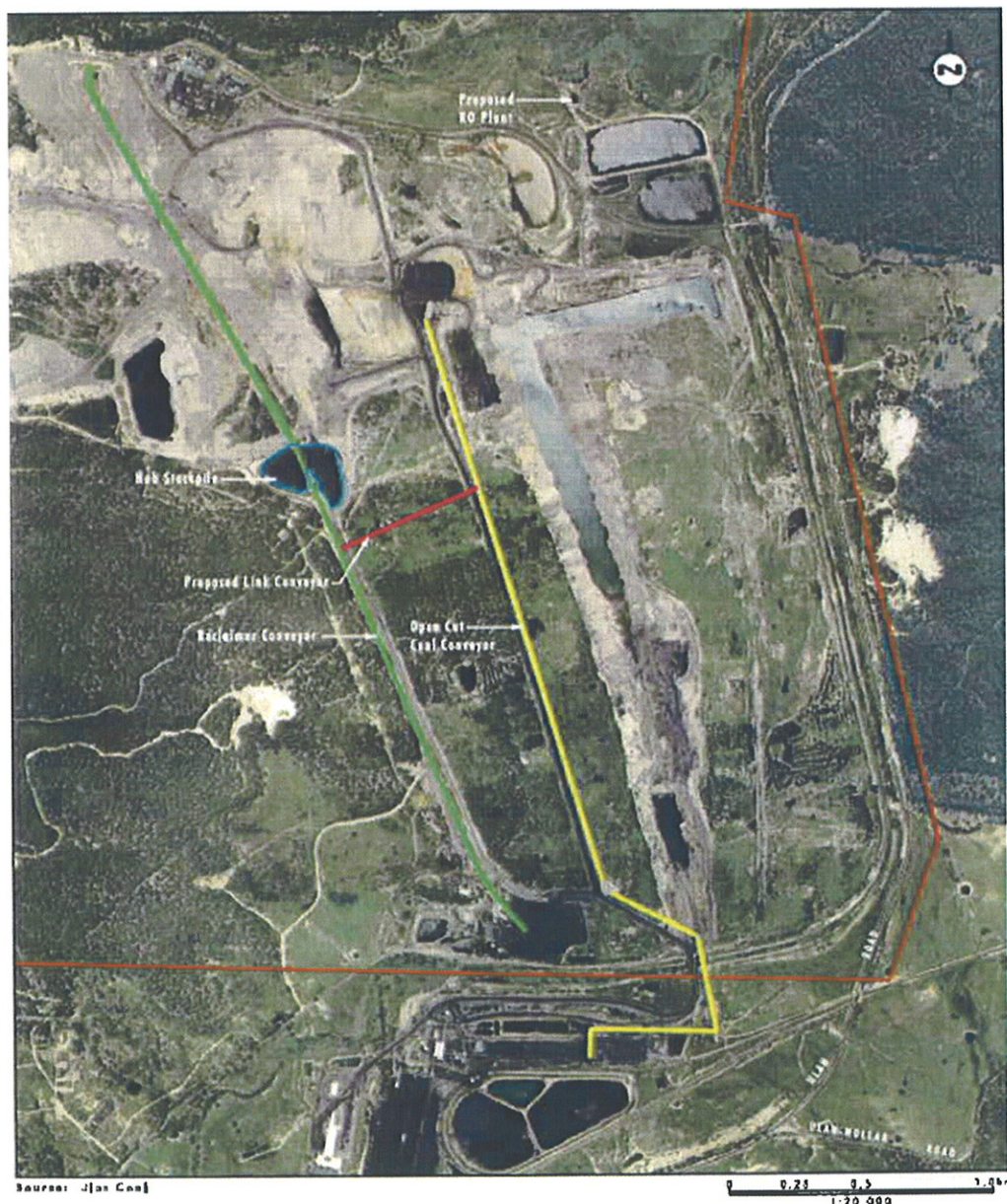


Figure 2: Location of proposed modifications

DA 103-5-2005 was approved by the Minister on 21 December 2005, to allow for multiple alterations and additions to Ulan Coal Mine. The modifications associated with this consent consist of:

- the construction of a link conveyor to connect the open cut coal conveyor and the reclaimer conveyor (Link Conveyor) (see Figure 2); and
- an increase in the capacity of the Run of Mine (ROM) Hub Stockpile from 400,000 tonnes to 800,00 tonnes (Stockpile Expansion) (see Figure 2).

RO Plant

UCML has approval to discharge up to 10 ML per day from Rowan's Dam to Ulan Creek in accordance with DA 113-12-98 and Environment Protection Licence (EPL) 394. UCML recently reviewed their Water Management Strategy for Ulan Coal Mine, which identified a need for the dewatering of the East Pit in order to allow for future tailings emplacement. In accordance with the strategy, UCML has suggested transferring water from East Pit to Rowan's Dam for discharge. The water within East Pit does not currently meet discharge criteria as stipulated by EPL 394. To ensure that all water discharged off site from Rowan's Dam meets appropriate water quality requirements, UCML is proposing to construct a RO Plant to treat the water piped from the East Pit (via Rowan's Dam) prior to discharge into Ulan Creek (see Figure 3).



Figure 3: Location of proposed Reverse Osmosis Plant

The proposed RO Plant is to be located adjacent to the current Rowan's Dam Discharge Point. This discharge point was approved under DA 113-12-98 and EPL 394 and has prescribed limits for discharge volumes (10 ML per day) and quality (see Table 1).

Table 1: *Limits for discharge*

Pollutant	Unit of Measure	50 percentile concentration limit	100 percentile concentration limit
Iron	mg/L		5
Oil and Grease	mg/L		10
pH	pH		6.5 to 8.5
Zinc	mg/L		5
Conductivity	Ms/cm	800	900

UCML is not seeking to increase the approved volumes stipulated within EPL 394 however it is expected that amendments will need to be made to EPL 394 to ensure consistency of the limits applied to the Rowan's Dam Discharge Point.

The RO Plant would consist of a four train plant (one of which is the control unit) that is capable of treating 4.5 ML of water per day. The trains are housed within shipping containers, which require minimal construction.

The proposed site of the RO Plant covers an area approximately 100 metres by 100 metres and would be located to the north-west of the existing Rowan's Dam (see Figure 3). The proposed location is in an area that has been heavily disturbed by other mining infrastructure and has benefits such as existing pumping infrastructure at Rowan's Dam. The RO Plant would utilise existing pipelines where possible, but would also require the installation of new above ground pipelines. Wastewater from the RO Plant would be used at either the Coal Handling Preparation Plant (CHPP) or Underground Crushing Plant for dust suppression. Wastewater would be directed to the CHPP via an existing pipeline from Rowan's Dam and a new line for the Underground Crushing Plant would be installed. The installation of this new line would utilise areas of disturbance within UCML's operations and be monitored with existing pipelines in accordance with UCML's burst pipe protection systems. The installation of the RO Plant would allow UCML to maintain the current water quality parameters for discharged water as regulated by its EPL.

Environmental assessments were undertaken by Umwelt (Australia) Pty Ltd for vegetation and archaeological sensitivities within the proposed RO Plant area. Results from the surveys are assessed in Section 5.

Link Conveyor

UCML is proposing to construct a Link Conveyor to connect the open cut conveyor and the reclaimer conveyor (see Figure 4). The construction of the Link Conveyor would allow for the transfer of high ash coal from the underground operations to the CHPP and would replace transferring coal by truck from the underground ROM stockpile to the CHPP. Use of trucks would only be required in case of emergency. The installation of the conveyor would increase the efficiency of the existing infrastructure and would help reduce noise and amenity impacts from trucks operating in the southern section of Ulan Coal Mine, which affects the adjoining village of Ulan. The installation of the conveyor would assist in reducing the greenhouse footprint of UCML's operations by reducing diesel consumption for the haulage activities associated with this operation.

The Link Conveyor would be constructed in an area previously disturbed by open cut mining operations and would therefore be unlikely to impact the amenity of the immediate area. It should be noted that the proposed location for the Link Conveyor is in an area that has been rehabilitated, however UCML has not identified any environmental sensitivities associated with Flora, Fauna or Heritage in the location of the proposed Link

Conveyor. The proposed conveyor would be covered and would be approximately 600 metres long with all loading and unloading points, feeders, transfer and discharge points having dust suppression systems which would operate automatically whenever the conveyor system is activated.



Figure 4: Location of proposed Link Conveyor

Stockpile Expansion

UCML is proposing to increase the approved capacity for tonnages of coal permissible at the hub stockpile. The hub stockpile was constructed as a surge capacity stockpile in order to provide a transfer point between the underground operations and coal being directed to the coal load-out and washing facilities. To allow mining operations to continue at the current rate, UCML proposes to increase the hub stockpile capacity from 400,000 tonnes to 800,000 tonnes (see Figure 2). There would be no increase in production from the underground operations or any changes to the approved footprint, height of the stockpile, infrastructure associated with the stockpile or the coal handling operations as a result of the increase in capacity. Coal is currently being extracted at a rate of 3500 tonnes per hour, with only 1250 tonnes per hour being moved from the hub stockpile to the coal loading and washing facilities. The modification to increase the hub stockpile capacity will allow UCML to continue mining at the current approved rate whilst maintaining compliance for volumes retained at the hub stockpile. The hub stockpile stands approximately 33 metres high at maximum capacity (which is governed by the height of the gantry delivering coal to the hub stockpile) and its approved footprint occupies an area of approximately 7.5 hectares, however the current operation does not

utilise the full extent of this area. If approved, the overall ROM coal stockpile capacity for Ulan Coal Mine would increase from 3,850,000 tonnes to 4,250,000 tonnes.

3 STATUTORY CONTEXT

Section 96

Under section 96(1A) of the EP&A Act, a consent authority may modify a development consent if it is satisfied that:

- a) *the proposed modification is of minimal environmental impact, and*
- b) *the development to which the consent as modified relates is substantially the same development for which consent was originally granted and before that consent as originally granted was modified (if at all) under this section.*

The Department has assessed the potential impacts of the proposal (Section 5) and is satisfied it would be of minimal environmental impact. It is also satisfied that the proposed modification represents a minor change to the approved mining operations on site, and consequently the development (as modified) would remain substantially the same development for which consent was originally granted.

Consent Authority

The Minister was the consent authority for the original development application, and is consequently the consent authority for this application.

However, the Executive Director Major Project Assessment division may determine the application under the Minister's delegation of 14 November 2007.

4 CONSULTATION

The Department is not required to notify or exhibit applications under Section 96(1A) of the EP&A Act, but referred the application to the Department of Water and Energy (DWE) and the Department of Environment and Climate Change (DECC) for comment.

DWE had no objections to the proposal. DECC had no objections to the proposal, subject to conditions (see below).

5 ASSESSMENT

The Department's assessment of the key issues is summarised in Table 2 below:

Table 2: *Assessment of key issues*

Reverse Osmosis Plant		
Issue	Prediction	Recommended Measures
Water	- Any potential changes to water quality in Ulan Creek from the discharge of water from the RO Plant would be of minimal environmental impact. - The Department is satisfied that the installation and operation of a RO Plant would have minimal environmental impact on the proposed site and Ulan Creek.	- The Department has drafted Conditions to manage potential environmental impacts on Ulan Creek outlined by DECC. - DECC has no objection to the discharge provided the discharge volume does not exceed 10 ML per day and water quality does not exceed certain regulatory limits. - In addition a suitably qualified person engaged by UCML is to conduct monitoring of Ulan Creek below the discharge point every 6 months to ascertain whether the discharge is affecting the stability of Ulan Creek, and Ulan Coal Mines Limited is to undertake a

		program of weed eradication in Ulan Creek below the discharge point. • DECC also requested that UCML make a separate application to DECC to vary EPL 394. • UCML would continue to monitor existing and new piping in accordance with UCML's burst pipe protection systems. • UCML would manage wastewater from the RO Plant in accordance with UCML's current internal Water Management Strategy.
Noise	• The RO Plant components are housed within shipping containers which eliminates noise generated by the operation of the units. • The Department is satisfied that the noise impacts associated with the proposed RO Plant are considered negligible.	• No additional control measures required.
Flora & Fauna	• Due to previous disturbance, the vegetation present at the proposed site is highly modified and not representative of original native vegetation communities of the Ulan area. • The proposed site does not support ecologically significant flora or fauna communities. • The Department is satisfied that there would be no predicted impacts on ecologically significant flora and fauna.	• No additional control measures required.
Aboriginal Heritage	• During a field inspection of the proposed site by Archaeologists and representatives of four Aboriginal groups two artefact scatter sites (RO/A and RO/B) were located within the proximity of the proposed RO Plant site (see Figure 3). • Artefacts were not identified within the remainder of the investigation area, therefore the Department is satisfied that there are no predicted impacts on Aboriginal heritage.	• DECC has requested that prior to construction and operation of the RO Plant fencing be installed to encompass artefacts sites RO/A and RO/B.
Link Conveyor		
Issue	Prediction	Recommended Measures
Flora & Fauna	• The ecological values of the rehabilitated site chosen for the Link Conveyor are not considered high and the area of disturbance requiring further rehabilitation will be minimal. • The Department is satisfied that there are no predicted impacts on ecologically significant flora and fauna.	• Flora and fauna would continue to be managed in accordance with UCML's Flora and Fauna Management Plan.
Air quality	• The conveyor will be covered and all loading and unloading points, feeders, transfer and discharge points would have dust suppression systems which operate automatically whenever the conveyor system is activated. • The Department is satisfied the proposed conveyor would have negligible impact on air quality.	• UCML are required to perform routine preventative maintenance of dust suppression equipment, as outlined in the development consent (DA 103-5-2005 Schedule 2, Condition 10).
Aboriginal Heritage	• The site of the proposed link conveyor was previously a mine site and therefore any Aboriginal archaeology sites which may have been located within the area would have been destroyed. • The Department is confident that the proposed conveyor would have no impact	• No additional control measures required.

	on Aboriginal archaeology.	
Noise	- The noise assessment undertaken by Wilkinson Murray determined that noise associated with the proposed conveyor is not expected to be audible at any receivers surrounding Ulan Coal Mine. - Trucking may still be utilised in emergency situations, however it is proposed that the installation of the Link Conveyor would replace haulage trucks associated with this operation in the southern part of the mine and therefore noise impacts affecting Ulan village would be reduced. - The Department is satisfied that the proposed conveyor would have negligible impact on noise receivers and may help to reduce noise impacts at Ulan village.	No additional control measures required.
Visual amenity	- The proposed conveyor would be an addition to the existing conveyor network and in its proposed location will be generally shielded by topography and existing vegetation. - The Department is satisfied that the proposed conveyor would have negligible impacts on visual amenity.	No additional control measures required.
Hub Stockpile Capacity Increase		
Issue	Prediction	Recommended Measures
Visual amenity	- The proposed hub stockpile capacity increase does not increase the approved footprint or height of the current stockpile, which is located within the existing project area and will not result in any significant changes in visual amenity. - The Department is satisfied that the proposed hub stockpile capacity increase would have substantially the same impact on visual amenity.	No additional control measures required.
Air quality & Noise	- The hub stockpile capacity increase proposes no construction of or changes to infrastructure or coal handling processes associated with the hub stockpile or any increase in the rate of coal throughput. - The Department is satisfied that the proposed hub stockpile capacity increase would have negligible air quality and noise impacts.	Operation of the hub stockpile would continue to be managed in accordance with the UCML Dust and Noise Management Plans.

6 CONCLUSION

The Department has assessed the application in accordance with the relevant requirements of the EP&A Act.

This assessment has found that the proposed modifications would be of minimal impact, and could be appropriately managed to ensure an acceptable level of environmental performance.

The installation of a RO Plant next to Rowans Dam would allow UMCL to dewater the Eastern Pit, which contains poorer quality water, and still comply with its existing discharge limits.

The construction of the Link Conveyor would allow UCML to improve the efficiency of the current conveyor system, and convey coal directly from the underground workings to the CHPP.

Increasing the capacity of the hub stockpile would give UCML greater flexibility to manage the coal coming out its underground workings, and use the modified conveyor system better.

On this basis, the Department is satisfied that the proposed modifications are justified, and should be approved.

7 RECOMMENDATION

It is RECOMMENDED that the Executive Director:

- consider the findings and recommendations of this report;
- approve the application under section 96(1A) of the EP&A Act; and
- sign the attached notice of modification.



David Kitto
Director
Major Development Assessment



Chris Wilson
Executive Director
Major Project Assessment